

E-002/RP-91-682 ORDER APPROVING MODIFIED WIND DEVELOPMENT PLAN

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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Chair
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In the Matter of the Petition of
Northern States Power Company
for Approval of its 1991
Resource Plan

ISSUE DATE: May 19, 1993

DOCKET NO. E-002/RP-91-682

ORDER APPROVING MODIFIED WIND
DEVELOPMENT PLAN

PROCEDURAL HISTORY

On October 1, 1991, Northern States Power Company (NSP or the Company) filed its first biennial resource plan under Minn. Rules, parts 7843.0100 to 7843.0600. The plan included a proposal to install a 10 MW wind facility by 1996.

On June 23, 1992, the Commission issued its ORDER REQUIRING FURTHER FILINGS. This Order denied the request of several parties for contested case proceedings on 1) the need for two peaking units in South Dakota and 2) the content of a contingency plan to deal with the early retirement of the Prairie Island nuclear plant. The Order required the Company to file a report on the status of its plans to build the South Dakota peaking units. It also required the parties to file detailed descriptions of the specific procedural approaches they were advocating for developing the factual and policy issues of the case.

On July 23, 1992, the Company revised its wind facility proposal to provide for up to 5 MW of wind by 1993, 20 MW by 1994, and the possible installation of an additional 75 MW of wind capacity after 1994.

On November 13, 1992, the Commission issued its ORDER APPROVING AND MODIFYING PLAN, REQUIRING CONSULTATION WITH INTERESTED PARTIES, AND SETTING REQUIREMENTS FOR NEXT RESOURCE PLAN FILING. The Commission determined that NSP's revised proposal was too late for consideration in the 1991 resource cycle but that it was a "change in circumstances" that could significantly influence the Company's selection of resources. As such, the Commission invoked its authority under Minn. Rules, part 7843.0500, subp. 5 to require additional administrative proceedings before the utility's next regularly scheduled resource plan to examine the Company's revised wind proposal. The Commission, therefore, directed the Company to file its detailed proposal for wind generation on Buffalo Ridge (as further modified in the Order) within 30 days of the Order.

On December 14, 1993, NSP filed its proposal. Comments on NSP's proposal were received from the Department, the RUD-OAG, and the Izaak Walton League of America (IWLA). NSP and the Department filed response comments.

The matter was scheduled to come before the Commission on March 18, 1993.

On March 16, 1993, NSP requested a continuance of the hearing because it was considering alternative methods of procuring the first 25 MW of wind power.

On April 6, 1993, NSP filed a letter stating that instead of owning and operating the first 25 MW of wind power as proposed in the December 14, 1992 proposal, it would prefer a developer to own and operate the first 25 MW and sell the power to NSP. In all other respects, the Company's December 14, 1993 proposal remained unchanged.

On May 6, 1993, the Commission met to consider this matter.

FINDINGS AND CONCLUSIONS

A. The Company's Proposal

NSP stated that its overall plan was to promote the development of 100 MW of additional renewable generation on its system. The renewables would be installed in three stages. The first two stages (50-60 MW) would be wind generation. The remaining 40-50 MW may come from wind, but may also come from other renewable sources.

At this time, NSP specifically seeks approval for the first stage of that proposal: 25 MW of wind. Initially for Stage 1, NSP proposed to own and operate the first 25 MW of wind generation. Five (5) MW of the 25 MW would be installed in late 1993 and 20 MW in 1994. NSP later decided that it would prefer that another developer to own and operate the first 25 MW. The Company stated that this would reduce the cost of the project and the risk to the ratepayers. The Company stated that it intended to issue a Request for Proposals by mid- to late April to solicit bids from interested developers. The Company adopted an expedited bid schedule so that the change in ownership will not significantly delay implementation of the first stage. Under the revised schedule, the on-line date will be early May 1994.

In addition, the Company later noted that the National Energy Policy Act (NEPA) provides for tax credits for renewables installed after January 1, 1994. The Company stated that this incentive has caused them to delay installation of the first 5 MW in order to take advantage of the tax credits.

NSP's 25 MW wind farm will be located in Lake Benton Township, Lincoln County, along the crest of the Buffalo Ridge. The site should have average wind speeds similar to NSP's monitoring sites in Holland, where wind speeds average 16.5 mph. The site is also convenient to NSP's transmission system. The wind farm will consist of 50 to 100 wind units, distribution lines, transformers, a substation, access roads, a service center, and a one-half mile transmission line. It will extend about 6 miles along Buffalo Ridge; only about 1 percent of land area will be taken out of production for the wind farm. The wind farm is compatible with current land use (crop farming, dairy, sheep, beef and hog farming). NSP expects the capital cost of the project to be approximately \$39.2 million. It estimates the cost of generation to be between 6.5 and 7.5 cents per kWh, before the application of any tax credits.

While only Stage 1 is before the Commission for approval in this Order¹, an understanding of the other two stages is helpful in determining the value and reasonableness of Stage 1:

Stage Two development will be an additional 25-35 MW of wind development with a target in-service date of 1995. In Stage Two, NSP plans to test three to four types of experimental, prototype or early commercial technologies. Stage Two will be competitively bid and may not be owned or operated by NSP. NSP noted that if it does not own this Stage, the Company will raise the issue of an equity adjustment in the context of evaluating alternatives. NSP noted that this issue does not need to be addressed at this time, but should be addressed in the Company's bidding proposal (Docket E-002/CI-93-6).

Stage Three would be the development of the remaining 40-50 MW of renewable generation with a target in-service date of 1997 or 1998. Results from Stages One and Two would be used to develop the most cost-effective renewable sources of generation on NSP's system. Stage Three would also be competitively bid. NSP is not requesting Commission decisions on Stages Two and Three at this time.

B. Parties' Comments, Company Responses, and Commission Analysis

1. The Department

The Department advised that NSP's three-stage Wind Development Plan complied with the Commission's November 13, 1992 Order and was reasonable. The Department recommended, however, that the plan be modified in certain respects:

First, NSP should not wait until Stage Two (1995) to test emerging technologies such as U. S. Windpower's variable speed turbine. The Company responded that U. S. Windpower's variable

¹ Stages Two and Three will receive consideration in future resource plan filings.

speed turbine is eligible for Stage 1 installation and that its manufacturer is participating in the bidding process.

Second, the Department recommended that NSP's Stage 1 installation consist of two-thirds proven technology and one-third emerging technologies. NSP responded that its investigation of the availability of the other emerging technologies led it to conclude that there was a material risk that those technologies would not be available for installation in the Stage 1 (1993-94) time frame.

Third, the Department recommended that NSP delay the planned 5 MW 1993 installation until 1994 because such a delay [and consequent availability of the National Energy Policy Act (NEPA) tax credit] would lower costs to ratepayers. NSP responded that it will delay installation of the first 5 MW until 1994 to take full advantage of the NEPA tax credit.

The Commission finds that NSP has appropriately responded to the Department's comments.

2. The RUD-OAG

First, OAG noted that NSP should install its first stage in the manner which would allow it to take full advantage of the NEPA tax credits. It also noted that the credits run for a ten year time period; NSP should therefore advance the installation date of resources scheduled for later in this period and should install more renewables in order to take advantage of these credits. NSP responded that it intended to take full advantage of the tax credits. This will occur if the Company complies with the Commission's timetable for this project. In its November 13, 1992 Order, the Commission stated that it expects NSP to complete the wind facility between 1995 and 1997. Order at page 11.

Second, OAG noted that this document was not intended to provide a full review of the final costs of the project, and that it expects a more complete accounting of costs at an appropriate time in the future. NSP did not contest this characterization.

Finally, OAG agreed that several issues, including the equity adjustment, should be addressed in review of the Company's bidding proposal. The RUD-OAG also suggested that the Commission may also review issues such as whether and how NSP should participate in its own bidding process. NSP did not respond to these comments. The Commission finds that these suggestions are will not be considered at this time, but will be considered later in these proceedings, at the time it conducts its review of the Company's bidding proposal.

The Commission finds that NSP has responded adequately to the RUD-OAG's relevant concerns.

3. Izaak Walton League of America (ILWA)

ILWA encouraged the Commission to delay action on this filing pending any vendor-specific modifications which may be required. NSP responded that such a delay would serve no demonstrated purpose. The Commission agrees with the Company on this point.

Second, ILWA questioned whether NSP's failure to commit to providing the 100 MW of wind capacity and to using a collaborative process to determine additional capacity to be dedicated to other renewables was consistent with previous Company statements and the Commission's November 13, 1992 Order. The Commission finds an unfortunate discrepancy between what the Company stated in its press release describing its commitment to wind power ("...a ten-fold" increase of its then 10 MW² wind commitment) and its statements before the Commission (that 100 MW as a goal for all renewables and only 50 MW was certain to be wind). Nevertheless, it is the Commission's Order that the Company must comply with, not its press release. Upon review of its Order, the Commission finds that it simply requires that the Company's wind facility have "at least 50 megawatts" of capacity. Order at page 11. The Commission's intention is to continue to review the appropriate amount of wind capacity on NSP's system in future resource plans.

Third, ILWA noted that NSP's plan to be the owner/operator of the project did not take advantage of more qualified operators and would preclude potentially more cost-effective ownership arrangements, arrangements that would transfer risk away from NSP and its ratepayers. As previously indicated, NSP subsequently modified its plan. As suggested by ILWA, NSP now proposes to purchase the 50 MW from a wind developer.

Fourth, regarding Stage 2, ILWA questioned NSP's intention to test three to four types of emerging technologies. It noted that given the proposed size of the stage two facility, none of the emerging technologies could be built to the scale which would yield valid cost or system reliability results for any of the technologies tested. IWLWA requested that the Commission require the Company to include further analysis of this issue. The Commission need not address this issue this time. This Order considers approval solely for Stage 1.

C. Commission Action

Having reviewed NSP's wind development proposal, as revised, the Commission finds that it complies with the November 13, 1992 Order and will approve Stage 1 of that proposal. To clarify, this action implies no finding that the costs incurred in Stage 1 are reasonable. The Commission will conduct a complete accounting of project costs at an appropriate time in the future.

² In its first integrated resource plan submitted October 1, 1991, NSP proposed to install a 10 MW wind facility by 1996.

ORDER

1. NSP's three-stage wind proposal to install at least 50 MW of wind generation by 1995 to 1997, as modified, complies with the Commission's November 13, 1992 Order.
2. Stage 1 of NSP's wind proposal, as modified, is approved.
3. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Richard R. Lancaster
Executive Secretary

(S E A L)